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states:(71) Applicant: **TOYOTA MOTOR CORP**(72) Inventor: **MORISHITA HIKARI
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**(54) ROTARY ATOMIZING
ELECTROSTATIC
PAINTING MACHINE**

(57) Abstract:

PURPOSE: To achieve miniaturization and wt. reduction by providing the runner supported by a non-contact type thrust bearing to the rear end of a rotary shaft and integrally forming a turbine to the outer peripheral part of the runner.

CONSTITUTION: Compressed air is preliminarily supplied to the air port 40 on the side of a thrust bearing 26 through the air supply port 42 of an inner housing 1. This air is supplied to the air ports 30a, 30b on the side of a radial air bearing 25 through air supply passages 35, 34 and injected from air spouts 33, 36, 41 and a rotary shaft 12 is supported by an air membrane to become freely rotatable. Thereafter, when turbine driving air is supplied to an air port 55 through the air supply port 56 of the inner housing 1 to be injected toward a

turbine blade 51 from a turbine nozzle 54, a runner 15 is rotated at high speed. By this constitution, high voltage can be applied to the inner housing 1 and this apparatus can be adapted to a robot.

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